

**Federal Operating Permit
Article 1**

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Covanta Fairfax, Inc.
Facility Name:	Covanta Fairfax
Facility Location:	9898 Furnace Road Lorton, Virginia
Registration Number:	71920
Permit Number:	NVRO71920

Effective Date

Expiration Date

Director, Department of Environmental Quality

Signature Date

Table of Contents, 2 pages
Permit Conditions, 52 pages

Table of Contents

I. FACILITY INFORMATION 4

II. EMISSION UNITS 6

III. MUNICIPAL WASTE COMBUSTORS WITH AUXILIARY FIRING – (EMISSION UNIT IDS 001-01 THROUGH 004-01 AND 001-02 THROUGH 004-02) 7

A. LIMITATIONS	7
B. PARAMETRIC MONITORING	14
C. CONTINUOUS EMISSIONS MONITORING	17
D. RECORDKEEPING	23
E. PERFORMANCE TESTING	25
F. REPORTING	31

IV. FACILITY WIDE CONDITIONS - OPERATOR TRAINING AND CERTIFICATION 34

A. REQUIREMENTS	34
B. RECORDKEEPING	36

V. FACILITY WIDE CONDITIONS – COLD SOLVENT DEGREASING 37

A. REQUIREMENTS	37
-----------------------	----

VI. INSIGNIFICANT EMISSION UNITS 39

VII. PERMIT SHIELD & INAPPLICABLE REQUIREMENTS 40

VIII. GENERAL CONDITIONS 41

A. FEDERAL ENFORCEABILITY	41
B. PERMIT EXPIRATION	41
C. RECORDKEEPING AND REPORTING	42
D. ANNUAL COMPLIANCE CERTIFICATION	43
E. PERMIT DEVIATION REPORTING	43
F. FAILURE/MALFUNCTION REPORTING	44
G. SEVERABILITY	45
H. DUTY TO COMPLY	45
I. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE	45
J. PERMIT MODIFICATION	45
K. PROPERTY RIGHTS	45
L. DUTY TO SUBMIT INFORMATION	45
M. DUTY TO PAY PERMIT FEES	46
N. FUGITIVE DUST EMISSION STANDARDS	46
O. STARTUP, SHUTDOWN, AND MALFUNCTION	47
P. ALTERNATIVE OPERATING SCENARIOS	47
Q. INSPECTION AND ENTRY REQUIREMENTS	47

R. REOPENING FOR CAUSE.....47

S. PERMIT AVAILABILITY48

T. TRANSFER OF PERMITS48

U. MALFUNCTION AS AN AFFIRMATIVE DEFENSE.....48

V. PERMIT REVOCATION OR TERMINATION FOR CAUSE.....49

W. DUTY TO SUPPLEMENT OR CORRECT APPLICATION.....49

X. STRATOSPHERIC OZONE PROTECTION50

Y. ASBESTOS REQUIREMENTS50

Z. ACCIDENTAL RELEASE PREVENTION.....50

AA. CHANGES TO PERMITS FOR EMISSIONS TRADING50

BB. EMISSIONS TRADING50

IX. STATE-ONLY ENFORCEABLE REQUIREMENTS 51

A. LIMITATIONS.....51

APPENDIX A – [RESERVED]

APPENDIX B – [RESERVED]

I. Facility Information

Permittee

Covanta Fairfax, Inc.
40 Lane Road
Fairfield, NJ. 07004

Glen Madelmayer
Vice President, Regional Operations

Facility

Covanta Fairfax, Inc.
9898 Furnace Road
Lorton, Virginia. 22079

Contact Person

Joseph Herrmann
Environmental Specialist
(973) 882-7285

Scott Drew
Facility Manager

County-Plant Identification Number: 51-059-0560

Facility Description: NAICS [221320] – Covanta Energy owns and operates a large municipal solid waste combustion facility with energy recovery under an agreement with Fairfax County. The facility maintains four 750 ton per day (nominal) waste combustion units with integrated reciprocating grate stokers and water wall boilers. Each combustor is also equipped with two natural gas-fired auxiliary burners. Products of combustion from each combustor are controlled by good combustion practices, ammonia injection (selective non-catalytic reduction), a combination of spray dryer and fabric filter baghouse, and activated carbon injection to reduce nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter (PM and PM-10), acid gases, metals and complex organics among others. Steam generated by the boilers drive turbines that generate electricity for sale to the local electric company.

The facility operates under the Prevention of Significant Deterioration Permit dated January 12, 1987 as amended February 18, 1988 and a Consent Agreement dated April 3, 1998 implementing Reasonably Available Control Technology. The requirements of the RACT consent agreement have been fulfilled. The facility is also subject to state Rule 4-54 (9 VAC 5-40-7950 et seq.) of the Virginia Air Pollution Control Board's Regulations for the Control and Abatement of Air Pollution. This rule implements various emissions limitations, operating, compliance, and record keeping requirements established by the Emissions Guidelines, Subpart Cb. Rule 4-54 is the

approved Clean Air Act Section 111(d)/129 plan for Large Municipal Waste Combustor (MWC) Units regulated under 40 CFR 62, Subpart VV sections 62.11640 through 62.11642 and was approved on October 29, 2004.

II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
001-01 through 004-01	001 - 004	Ogden-Martin MSW Combustor with Martin-Stoker boiler system	343.75 MMBtu/hr	SNCR (ammonia injection), 2000		NO _x	PSD permit dated January 12, 1987 as amended February 18, 1988. NO _x RACT Consent Agreement dated April 3, 1998.
				Flakt spray dryer, 02/88	1,4,7,10	SO ₂ and MWC acid gases	
				Flakt fabric filter baghouse, 02/88	3,6,9,12	MWC metals, PM/PM-10	
				activated carbon injection system		mercury	
001-02 A,B through 004-02 A,B	001 - 004	Zurn natural gas fired auxiliary burners (02/88)	103.125 MMBtu/hr	same	same	same	same
005	N/A	Cold Solvent Degreasers	N/A	none	---	---	---

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

III. Municipal Waste Combustors with Auxiliary Firing – (Emission Unit IDs 001-01 through 004-01 and 001-02 through 004-02)

A. Limitations

1. **Particulate Emissions Control** - Particulate matter and municipal waste combustor (MWC) metal emissions, including cadmium, lead and mercury, from each MWC furnace shall be controlled by fabric filter baghouses. The fabric filter baghouses shall be provided with adequate access for inspection and shall be in operation when the MWC furnaces are operating.
(9 VAC 5-80-110 and Condition 8 and 9 of 1/12/87 PSD Permit)
2. **Carbon Monoxide, Nitrogen Oxides and Volatile Organic Compound Emissions Control** – Carbon monoxide (CO), nitrogen oxides (NO_x) and volatile organic compound (VOC) emissions from each MWC furnace shall be controlled by furnace design, proper operation, and good combustion practices.
(9 VAC 5-80-110 and Condition 10 of 1/12/87 PSD Permit)
3. **Municipal Waste Combustor Organics Emissions Control** - Municipal waste combustor organics (dioxins/furans) shall be controlled by proper operation and good combustion practices.
(9 VAC 5-80-110 and Condition 16 of 1/12/87 PSD Permit)
4. **Approved Fuel: Municipal Solid Waste (MSW)** – The approved fuel for each municipal waste combustor (MWC) is municipal solid waste (MSW). A change in the fuel may require a permit to modify and operate. Acceptable municipal solid waste includes household waste, commercial/retail waste, institutional waste, and other waste with emission characteristics similar to the acceptable wastes as determined by the permittee and approved by the Regional Air Permit Manager, Northern Virginia Regional Office, or a combination thereof as defined in this condition. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, non-manufacturing activities at industrial facilities, and other similar establishments or facilities. Any other waste shall be reviewed in accordance with the approved Material Review Process (MRP). All Commercial/retail waste shall be mixed with other approved fuels prior to charging to the combustor, in order to prevent discreet loads from being charged to the boiler. Institutional waste includes material discarded by schools, non-medical waste discarded by hospitals, material discarded by non-manufacturing activities at prisons and government facilities, and material discarded by other similar establishments or facilities. Municipal solid waste does not include hazardous waste, as defined by federal and state waste regulations. In addition, municipal solid waste may not include industrial process or manufacturing waste, used oil, sewage sludge, wood pallets, construction, renovation, and demolition wastes, medical waste motor vehicles (including motor vehicle parts or vehicle fluff), unless approved via the approved MRP. The permittee shall monitor the waste

delivered to the facility to ensure that only MSW as defined herein is being processed by the facility. This definition of MSW may in the future be expanded to include additional waste types not identified in this condition. To facilitate any revision, the permittee shall submit requests in writing to the Regional Air Permit Manager, Northern Virginia Regional Office. Information on waste composition and emissions characterizations shall be included with any submittal. The request and supporting information will be reviewed and evaluated to determine new source review applicability. The permit t will be revised in accordance with the procedures established in the appropriate permitting regulations in the Regulations for the Control and Abatement of Air Pollution.
(9 VAC 5-80-110 and Condition 5 and 22 of 1/12/87 PSD Permit)

5. **Auxiliary Fuel** - The approved auxiliary fuel for each MWC is natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 11 of 1/12/87 PSD Permit)
6. **Annual Natural Gas Capacity Factor** – The firing of each MWC with natural gas shall not exceed an annual capacity factor of 10 percent. The annual capacity factor is determined by dividing the actual heat input to the MWC unit during the calendar year from the combustion of natural gas by the potential heat input to the MWC unit if the unit had been operating 8,760 hours at the maximum design heat input capacity.
(9 VAC 5-80-110, 40 CFR 60.43b (d), 40 CFR 60.43b (e), 40 CFR 60.44b (d) and Condition 11 of 1/12/87 PSD Permit)
7. **MWC Capacity** – The charging rate of each MWC shall not exceed 750 dry tons per day of MSW, adjusted for moisture content. For the purpose of this permit, the moisture adjustment shall be 18 percent by weight, resulting in an effective wet-based limit of 885 tons per day per MWC. Compliance shall be demonstrated based on monitoring conducted in accordance with Condition B.2. This limit on charging rate applies on a thirty-day rolling average. The permittee may request the use of alternate moisture content by submitting information to support the use of the alternative. This may consist of an alternative value, or a process or methodology to determine a variable value. The request and supporting information must be submitted to the Air Permit Manager, Northern Virginia Regional Office, for consideration and approval prior to use. Appendix A to this permit will serve as the repository of the alternative values and approaches such that changes can be made to the value or approaches without amending the main body of this permit. The permit will be revised in accordance with the procedures established in 9 VAC 5-80-190 as appropriate.
(9 VAC 5-80-110 and Condition 5 of 1/12/87 PSD Permit)
8. **MSW Throughput** – The facility shall process no more than 1,095,000 tons per year of MSW, corrected for moisture. For the purpose of this permit, the moisture adjustment shall be 18 percent by weight, resulting in an effective wet-based limit of 1,292,100 tons per year. Compliance shall be demonstrated based on daily waste monitoring conducted in accordance with Condition B.2. The permittee may request the use of alternate moisture content as provided in Condition 7.
(9 VAC 5-80-110 and Condition 5 of 1/12/87 PSD Permit)

9. **MWC Unit Load** – The permittee shall operate each MWC at a load level no greater than 110 percent of the maximum demonstrated unit load for that unit. Maximum demonstrated load is defined as the highest 4-hour arithmetic average MWC steam load achieved during four consecutive hours during the most recent dioxin/furan performance test. Exceptions to this requirement are as follows:
- a. During the annual dioxin/furan performance test and the 2 weeks preceding the annual dioxin/furan performance test, the MWC unit load limit is not applicable.
 - b. The MWC unit load limit may be waived in accordance with written permission granted by the Air Compliance Manager, Northern Virginia Regional Office, for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance, or advancing the state-of-the-art for controlling facility emissions.
 - c. During calendar years where no performance test for dioxin/furans are required due to the reduced testing schedule as authorized in Condition E.10, the affected MWC unit shall conform to the maximum demonstrated MWC unit load level limit as determined during the most recent performance test.

Compliance shall be demonstrated based on data derived from steam flow or feed water flow measurements required in Condition B.4.
(9 VAC 5-80-110 and 9 VAC 5-40-8120 A.)

10. **Fabric Filter Baghouse Inlet Temperature** - The permittee shall maintain the temperature at the inlet of each fabric filter baghouse to within but no greater than 17 °C of the maximum demonstrated inlet fabric filter baghouse temperature. Maximum demonstrated inlet fabric filter baghouse temperature is defined as the highest 4-hour arithmetic average flue gas temperature measured at the fabric filter baghouse inlet during four consecutive hours during the most recent dioxin/furan performance testing. Exceptions to this requirement are as follows:
- a. During the annual dioxin/furan performance test and the 2 weeks preceding the annual dioxin/furan performance test, the fabric filter baghouse inlet temperature limit is not applicable.
 - b. During calendar years where no performance test for dioxin/furans are required due to the reduced testing schedule as authorized in Condition E.10, the affected MWC unit shall conform to the fabric filter baghouse inlet temperature limit as determined during the most recent performance test.

Compliance shall be demonstrated based on data derived from temperature measurements required in Condition B.6. These data shall be maintained on site and made available to Department of Environmental Quality (DEQ) personnel in order to determine compliance status.

(9 VAC 5-80-110 and 9 VAC 5-40-8120 B.)

11. **Carbon Injection System Mass Feed Rate Indicators** - The permittee shall maintain the carbon injection system operating parameters that are the primary indicators of carbon mass feed rate to levels equal to or greater than those documented during the most recent mercury performance test. The permittee has identified gravimetric feed rate as the preferred indicator of carbon mass feed rate. Compliance shall be demonstrated based gravimetric feed rate measurements required in Condition B.9. These data shall be maintained on site and made available to DEQ personnel in order to determine compliance status.

(9 VAC 5-80-110 and 9 VAC 5-40-8140 J.)

12. **Fabric filter Baghouse Pressure Drop** – The permittee shall monitor and record the pressure drop across each fabric filter baghouse on a daily basis. These data shall be maintained on site and made available to DEQ personnel in order to determine compliance status.

(9 VAC 5-80-110 and Condition 15 of 1/12/87 PSD Permit)

13. **Proper Operation and Good Combustion Practices**- The permittee shall operate and maintain each MWC unit utilizing methods and techniques consistent with proper operation and good combustion practices, and in a manner consistent with good air pollution control practices of minimizing emissions. For the purpose of this permit, at a minimum, proper operation and good combustion practices shall be demonstrated by the following:

- a. Compliance with maximum MWC unit load level in Condition 9,
- b. Compliance with the fabric filter baghouse inlet temperature level in Condition 10,
- c. Maintaining minimum boiler/furnace temperature of 1800 °F averaged over a four-hour block (as determined by boiler roof-top temperature above 1135 °F, four-hour block average). This condition applies when each MWC unit is combusting MSW and does not apply when each MWC unit is only combusting auxiliary fuel.
- d. Maintaining appropriate and stable excess air established to accommodate the variable energy and moisture content of the waste, as confirmed by hourly steam generation data,
- e. Compliance with the CO emission standard in Condition 14 and CO emission limit in Condition 16, as confirmed by the CO monitoring system required in Condition C.23, and
- f. Compliance with the opacity limit in Condition 18, as confirmed by the opacity monitoring systems required in Condition C.2.

(9 VAC 5-80-110 and Condition 10 of 1/12/87 PSD Permit)

14. MWC Rule 4-54 Emission Standards – Emissions from the operation of each MWC unit shall not exceed the limits specified below:

- a. Particulate Matter (PM): 27 milligrams per dry standard cubic meter, corrected to 7 percent oxygen (O₂).
(9 VAC 5-40-7970)
- b. Carbon Monoxide (CO): 100 parts per million by volume, corrected to 7 percent O₂, dry basis, calculated as a 4-hour block arithmetic average. This 4-hour block average is defined as the average of four consecutive one-hour emission concentrations measured over periods of time from 12:00 midnight to 4 a.m., 4a.m. to 8 a.m., 8 a.m. to 12:00 noon, 12:00 noon to 4 p.m., 4p.m. to 8 p.m., and 8 p.m. to 12:00 midnight. [The 4-hour block average calculation should exclude those hours in which no waste was being combusted for the full hour.]
(9 VAC 5-40-7980 and 9 VAC 5-40-7960 C.)
- c. Sulfur Dioxide (SO₂): 29 parts per million by volume, or 25 percent of the potential SO₂ emission concentration (75 percent reduction by weight or volume), corrected to 7 percent O₂, dry basis, whichever is less stringent. Compliance with this standard is based on a 24-hour daily geometric mean. This 24-hour daily average is defined as the geometric mean of all hourly average emission concentrations measured over a 24-hour period between 12:00 midnight and the following midnight. [The 24-hour average calculation should exclude those hours in which no waste was being combusted for the full hour.]
(9 VAC 5-40-8020 and 9 VAC 5-40-7960 C.)
- d. Nitrogen Oxides (NO_x): 205 parts per million by volume, corrected to 7 percent O₂, dry basis, based on a 24-hour daily arithmetic average. This 24-hour daily average is defined as the arithmetic average of all hourly average emission concentrations measured over a 24-hour period between 12:00 midnight and the following 12:00 midnight. [The 24-hour average calculation should exclude those hours in which no waste was being combusted for the full hour.]
(9 VAC 5-40-8050 and 9 VAC 5-40-7960 C.)
- e. Hydrogen Chloride (HCl): 29 parts per million by volume or 5 percent of the potential HCl emission concentration (95 percent reduction by weight or volume), corrected to 7 percent O₂, dry basis, whichever is less stringent.
(9 VAC 5-40-8030)
- f. Cadmium: 0.040 milligrams per dry standard cubic meter, corrected to 7 percent O₂.
(9 VAC 5-40-7990)
- g. Lead: 0.44 milligrams per dry standard cubic meter, corrected to 7 percent O₂.
(9 VAC 5-40-8000)
- h. Mercury: 0.080 milligrams per dry standard cubic meter or 15 percent of the

potential mercury emission concentration (85 percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent.
(9 VAC 5-40-8010)

- i. Dioxin/Furan: 30 nanograms per dry standard cubic meter, expressed as total mass dioxins/furans, corrected to 7 percent oxygen.
(9 VAC 5-40-8040)

Compliance with these emission standards shall be determined by continuous emissions monitors (CEMs) or performance tests as detailed throughout this permit. The permittee may request that compliance with these emission standards be determined using carbon dioxide (CO₂) measurements corrected to an equivalent of 7 percent O₂. If authorized to do so, the permittee shall establish the relationship between O₂ and CO₂ levels as specified in Condition C.7 (O₂ and CO₂ CEMS).
(9 VAC 5-80-110 and 9 VAC 5-40-8140 D.)

15. **Startup and Shutdown** – The emission standards in Condition 14 apply at all times except during periods of startup, shutdown, and malfunction. Duration of startup, shutdown, or malfunction periods are limited to three hours per occurrence, except as provided below:

- a. The startup period commences when the MWC unit begins continuous burning of MSW and does not include any warm-up period when the MWC unit is combusting natural gas or other non-MSW fuel, and no MSW is being fed to the combustor.
- b. Continuous burning is the continuous, semi-continuous, or batch feeding of MSW for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of MSW solely to provide thermal protection of the grate or hearth during the startup period when MSW is not being fed to the grate is not considered to be continuous burning.
- c. For the purpose of compliance with the CO emission limit, if a boiler water level control or loss of combustion air control (e.g., loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to fifteen hours per occurrence.

(9 VAC 5-80-110 and 9 VAC 5-40-8100 B.1.)

16. **MWC Unit Criteria Pollutant Emission Limits** - Emissions from the operation of each MWC unit shall not exceed the limits specified below:

SO ₂	44.4 lbs/hr	176.6 tons/yr
NO _x (as NO ₂)	206.3 lbs/hr	716.2 tons/yr

CO	158.1 lbs/hr	60.3 tons/yr
PM	7.5 lbs/hr	30.0 tons/yr
Lead	1.7 lbs/hr	6.7 tons/yr

Compliance shall be determined based on CEMS data, compliance with control device operational parameters/limitations, fuel restrictions and steam limits, MWC operational data, results of annual stack tests, record keeping and any other relevant information necessary which can provide credible evidence of emissions performance. Annual emissions shall be calculated on a calendar year basis.
(9 VAC 5-80-110 and Condition 6 of 1/12/87 PSD Permit)

17. MWC Unit Non-Criteria Pollutant Emission Limits - Emissions from the operation of each MWC unit shall not exceed the limits specified below:

Cadmium	4.7×10^{-2} lbs/hr	0.19 tons/yr
Mercury	0.33 lbs/hr	1.32 tons/yr
HCl	28.53 lbs/hr	113.6 tons/yr
Total Dioxins and Furans (USEPA Equivalents)	2.0 ng/m^3	2.42×10^{-6} tons/yr
Hydrogen Fluoride	0.45 lbs/hr	1.78 tons/yr
Sulfuric Acid Mist	7.1 lbs/hr	28.3 tons/yr

Compliance with the limits shall be determined based on compliance with control device operational parameters/limitations, fuel restrictions and steam limits, MWC operational data, results of the annual stack tests, record keeping and any other relevant information necessary which can provide credible evidence of emissions performance. Annual emissions shall be calculated on a calendar year basis.
(9 VAC 5-80-110 and Condition 7 of 1/12/87 PSD Permit)

18. Visible Emissions – The permittee shall not cause or permit to be discharged into the atmosphere from each MWC unit any visible emissions in excess of 10 percent opacity during any six-minute period. Compliance shall be demonstrated annually as provided in Condition III.E.5. Continuous opacity monitoring data collected for the purpose of compliance with this condition shall be used as an indicator of proper operation and good combustion practices and as a tool to implement corrective actions as necessary. The permittee may be required to conduct a retest of visible emissions after any corrective

actions have been completed.

(9 VAC 5-80-110, 9 VAC 5-40-8060 and Condition 20 of 1/12/87 PSD permit)

19. **Fugitive Dust/Emissions** – The permittee shall not cause or permit to be discharged into the atmosphere visible emissions from combustion ash from an ash conveying system (including conveyor transfer points) in excess of 5 percent of the observation period (9 minutes per 3-hour period) as determined by Reference Method 22 observations as specified in Condition E.13, except as provided in a. and b. below:

- a. The emission limit shall not cover visible emissions discharged inside buildings or enclosures of ash conveying systems, however the emission limit shall cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.
- b. The emission limit shall not apply during periods of maintenance and repair of the ash handling system.

(9 VAC 5-80-110 and 9 VAC 5-40-8070)

20. **Ozone Action Days** – The Department of Environmental Quality, Northern Virginia Regional Office may notify the permittee when meteorological conditions are favorable for the potential buildup of ozone concentrations in the area for more than 24 hours, when they exceed the National Ambient Air Quality Standard (8-hr standard of 0.08 ppm) and when concentrations are no longer expected to exceed the standard. A Code Red ozone day forecast by the local air quality advisory network shall be considered appropriate notification of such an event. After either of these notifications, the permittee shall take reasonable actions to minimize impact of the facility during periods of expected adverse air quality.

(9 VAC 5-80-110 and Condition 24 of 1/12/87 PSD permit)

B. Parametric Monitoring

1. **Hours of Operation** – The permittee shall monitor and record daily hours of operation of each MWC unit.
(9 VAC 5-80-110 and Condition 18 of 1/12/87 PSD Permit)
2. **Refuse Combusted** – The permittee shall monitor and record the daily mass (in tons) of MSW combusted in each MWC. This shall be accomplished by measuring waste in delivery trucks as each truck passes over scales upon entering the facility, and subtracting the estimated portion of the daily waste stream that is separated for other disposal options prior to transfer to the pit. The sum of the delivery records minus the separated portion for each day divided by four units shall be used to approximate the quantity of waste that is combusted by each MWC over a rolling thirty-day period. The permittee may request or the DEQ may require the use of steam measurements as a surrogate to waste measured across the scale as the method to demonstrate compliance with the waste capacity and

throughput limits in Condition A.7 and A.8. The request and supporting information must be submitted to the Air Permit Manager for consideration and approval prior to use. At a minimum, the submission should contain the approach, calculation methodology, and procedures to verify the correlation between waste combusted and the steam generated. Appendix B to this permit will serve as the repository of the accepted approach, calculation methodology, and procedures to verify the correlation between waste combusted and the steam generated provided the result utilizing the proposed approach does not trigger state or federal new source review applicability. The permit will be revised in accordance with the procedures established in 9 VAC 5-80-190 as appropriate. (9 VAC 5-80-110, 40 CFR 60.53 and Condition 18 of 1/12/87 PSD Permit)

3. **Furnace Combustion Temperature** – The permittee shall continuously monitor temperature within the furnace to ensure proper operation, good combustion practices and compliance with the temperature requirement in Condition A.13.
(9 VAC 5-80-110 and Condition 15 of 1/12/87 PSD Permit)
4. **Steam flow or Feed water Flow** – The permittee shall demonstrate compliance with load level requirements in Condition A.9 based on the procedures specified below:
 - a. The permittee shall install, calibrate, maintain, and operate a steam flow meter or a feed water flow meter; measure steam (or feed water) flow in thousand pounds per hour on a continuous basis; and record the output of the monitor. Steam (or feed water) flow shall also be calculated in 4-hour block arithmetic averages. Steam flow measurements shall be made prior to any non-emergency steam venting locations.
 - b. Measurement devices such as flow nozzles and orifices are not required to be re-calibrated after they are installed.
 - c. All signal conversion elements associated with steam (or feed water flow) measurements must be calibrated according to the manufacturer's instructions before each dioxin/furan performance test, and at least once per year.

(9 VAC 5-80-110 and 9 VAC 5-40-8150 C.)

5. **MWC Unit Load During Performance Test** - The permittee shall determine the maximum demonstrated MWC unit load during each performance test during which compliance with the dioxin/furan emission standard specified in Condition A.17 is achieved. The maximum demonstrated MWC unit load shall be the highest 4-hour arithmetic average load achieved during four consecutive hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved. The measured MWC unit loads and calculated maximum demonstrated MWC unit loads required by this condition shall be displayed in the performance test report(s) submitted in accordance with Condition E.3.
(9 VAC 5-80-110 and 9 VAC 5-40-8150 C.)

6. **Fabric filter baghouse Inlet Temperature** – The permittee shall install, calibrate,

maintain, and operate a device for measuring the temperature of the flue gas stream at the inlet to each fabric filter baghouse on a continuous basis. The temperature shall be calculated in 4-hour block arithmetic averages to determine compliance with the maximum fabric filter baghouse, inlet temperature requirements in Condition A.10.

(9 VAC 5-80-110 and 9 VAC 5-40-8150 C.)

7. **Fabric filter baghouse Inlet Temperature During Performance Test** - The maximum demonstrated fabric filter baghouse inlet temperature shall be determined during each performance test for dioxins/furans during which compliance with the dioxin/furan emission standard specified in Condition A.14 is achieved. The maximum demonstrated fabric filter baghouse inlet temperature shall be the highest 4-hour arithmetic average temperature achieved at the fabric filter baghouse inlet during four consecutive hours during the most recent test during which compliance with the dioxin/furan limit was achieved.

(9 VAC 5-80-110 and 9 VAC 5-40-8150 C.)

8. **Activated Carbon Feed During Performance Test**- During the performance tests for mercury, the permittee shall estimate an average carbon mass feed rate based on carbon injection system operating parameters such as the gravimetric feed rate, hopper volume, hopper refill frequency, or other parameters appropriate to the feed system being employed, as specified below:

- a. An average carbon mass feed rate in kilograms per hour or pounds per hour shall be estimated during each performance test for mercury emissions based on an 8-hour average. The mercury test occurs over an 8-hour period; three 2-hour test runs plus two hours to allow for port changes. Though mercury sampling is not being conducted during port changes, carbon injection is continuing in order to support required mercury removal. To obtain representative injection rates, the permittee must therefore maintain the same injection rate during port changes as maintained during the test period prior to the port changes.

(9 VAC 5-80-110, 9 VAC 5-40-8140 J. and EPA document 0106-00-002-002, page 9-1)

9. **Activated Carbon Feed Rate** – The permittee shall estimate the total carbon usage of the plant (kilograms or pounds) for each calendar quarter by two independent methods, according to the procedures specified below:

- a. The weight of carbon delivered to the plant, adjusted for silo inventory.
- b. Estimate the average carbon mass feed rate in kilograms per hour or pounds per hour for each hour of operation for each carbon injection system based on the operating parameters specified in Condition 8, and sum the results for carbon injection systems at the plant for the total number of hours of operation during the calendar quarter.

(9 VAC 5-80-110 and 9 VAC 5-40-8140 J.)

C. Continuous Emissions Monitoring

1. **General Monitoring** – The provisions of 40 CFR 60.13 – Monitoring Requirements, shall apply with regard to the emission standards and limits contained in Conditions A.14, and A.16 - 18, and installation, evaluation and operation of each CEMS required in this section.
(9 VAC 5-80-110, 9 VAC 5-40-8140 A. and 40 CFR 60.13)

Opacity

2. **Opacity Monitoring** – The permittee shall install, calibrate, maintain and operate a continuous opacity monitor system (COMS) for measuring opacity from each MWC stack in accordance with the provisions listed below:
 - a. The COMS shall be installed, evaluated, and operated in accordance with 40 CFR 60.13.
 - b. The output of the COMS shall be recorded on a 6-minute block average basis.
 - c. The COMS shall conform to Performance Specification 1 in Appendix B of 40 CFR 60

(9 VAC 5-80-110, 9 VAC 5-40-8140 B. and Condition 15 of 1/12/87 of PSD Permit)

Oxygen or Carbon Dioxide

3. **O₂ or CO₂ CEMS** – The permittee shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) and record the output of the system for measuring the O₂ or CO₂ content of the flue gas at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides are monitored. The monitor shall be installed, evaluated and operated in accordance with 40 CFR 60.13.
(9 VAC 5-80-110, 9 VAC 5-40-8150 B. and Condition 15 of 1/12/87 PSD Permit)
4. **O₂/CO₂ CEMS Span** – The span value of the O₂ (or CO₂) monitor shall be 25 percent O₂ (or CO₂).
(9 VAC 5-80-110 and 9 VAC 5-40-8150 B.1.)
5. **O₂/CO₂ CEMS Performance Specification** – All O₂ or CO₂ CEMS shall conform to Performance Specification 3 in appendix B of 40 CFR 60 except for section 2.3 (relative accuracy requirement).
(9 VAC 5-80-110 and 9 VAC 5-40-8150 B.4)
6. **O₂/CO₂ CEMS Quality Assurance** – The procedures of Appendix F of 40 CFR 60 except for section 5.1.1 (relative accuracy test audit) shall apply to the O₂ or CO₂ CEMS.
(9 VAC 5-80-110 and 9 VAC 5-40-8140 B.)

7. **Procedures for CO₂ as Diluent** – If CO₂ is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels shall be established during performance tests according to the procedures and methods as specified below:
- The fuel factor equation in Reference Method 3B shall be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Reference method 3, 3A, or 3B, as applicable, shall be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.
 - Samples shall be taken for at least 30 minutes in each hour.
 - Each sample shall represent a 1-hour average.
 - A minimum of three runs shall be performed.

(9 VAC 5-80-110 and 9 VAC 5-40-8150 B.)

Sulfur Dioxide

8. **SO₂ Monitoring** – The permittee shall install, calibrate, maintain, and operate a continuous emissions monitoring systems (CEMS) for measuring sulfur dioxide (SO₂) emissions prior to the spray dryers and discharged from each MWC stack, and record the output of the systems.
(9 VAC 5-80-110, 9 VAC 5-40-8140 D. and Condition 15 of 1/12/87 PSD Permit)
9. **SO₂ Emission Standard Compliance by CEMS** - Compliance with the SO₂ emission standard contained in Condition A.14 shall be determined by using the CEMS specified in Condition 8. The CEMS shall be used to calculate a 24-hour daily geometric average emission concentration or a 24-hour daily geometric average percent reduction using Reference Method 19, sections 4.3 and 5.4, as applicable. Compliance with the SO₂ emission limit shall be determined based on the 24-hour daily geometric average of the hourly arithmetic average emission concentrations using CEMS outlet data if compliance is based on an emission concentration or CEMS inlet and outlet data if compliance is based on a percent reduction.
(9 VAC 5-80-110 and 9 VAC 5-40-8140 D.)
10. **Valid SO₂ CEMS Data** - At a minimum, valid CEMS hourly averages shall be obtained as specified below, for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that each MWC unit is combusting MSW.
- At least two data points per hour shall be used to calculate each 1-hour arithmetic average.
 - Each SO₂ 1-hour arithmetic average shall be corrected to 7 percent O₂ on an hourly basis using the 1-hour arithmetic average of the O₂ (or CO₂) CEMS data required in Condition 3.

(9 VAC 5-80-110 and 9 VAC 5-40-8140 D.)

11. **SO₂ CEMS Results** - The 1-hour arithmetic averages required under Condition 10 shall be expressed in parts per million corrected to 7 percent O₂ (dry basis) and used to calculate the 24-hour daily geometric average emission concentrations and daily geometric average emission percent reductions. The hourly average shall be calculated based on completion of a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period, as specified in 40 CFR 60.13(e)(2).
(9 VAC 5-40-1840 D.)

12. **Use All Valid SO₂ CEMS Data** - All valid CEMS data shall be used in calculating average emission concentrations and percent reductions even if the minimum CEMS data requirements of Condition 10 are not met.
(9 VAC 5-80-110 and 9 VAC 5-40-8140 D.)

13. **Substitute SO₂ Emissions Data** - When SO₂ emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems, as approved in writing by the Air Compliance Manager, Northern Virginia Regional Office and U.S. Environmental Protection Agency (EPA), or Reference Method 19 to provide, as necessary, valid emissions data for a minimum of 75 percent of the hours per day that the facility is operated and combusting MSW for 90 percent of the days per calendar quarter that each MWC is operated and combusting MSW.
(9 VAC 5-80-110 and 9 VAC 5-40-8140 D.)

14. **SO₂ CEMS Performance Specifications** - The CEMS shall be operated according to Performance Specification 2 in appendix B of 40 CFR 60.

- a. During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 in Appendix B of 40 CFR 60, SO₂ and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and the test methods specified below.

(1) For SO₂, Reference Method 6, 6A, or 6C shall be used.

(2) For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable, shall be used.

- b. The span value of the CEMS at the inlet to the sulfur dioxide control device shall be 125 percent of the maximum estimated hourly potential SO₂ of the MWC unit. The span value of the CEMS at the outlet of the SO₂ control device shall be 50 percent of the maximum estimated hourly potential SO₂ emissions of the MWC unit.

(9 VAC 5-80-110 and 9 VAC 5-40-8140 D.)

15. **SO₂ CEMS QA and Calibration** - Quarterly accuracy determinations and daily

calibration drift tests shall be performed in accordance with Procedure 1 in Appendix F of 40 CFR 60.
(9 VAC 5-80-110 and 9 VAC 5-40-8140 D.13.)

Nitrogen Oxides

16. **NO_x CEMS** - The permittee shall install, calibrate, maintain, and operate a CEMS for measuring nitrogen oxides (NO_x) discharged from each MWC stack and record the output of the system.

(9 VAC 5-80-110, 9 VAC 5-40-8140 G. and Condition 15 of 1/12/87 PSD Permit)

17. **NO_x Emission Standard Compliance by CEMS** – Compliance with the NO_x emissions limit in Condition A.14 shall be determined by using the CEMS specified in Condition 16. The CEMS shall be used to calculate a 24-hour daily arithmetic average emission concentration using Reference Method 19, section 4.1. Compliance shall be determined based on the 24-hour daily arithmetic average of the 1-hour arithmetic average emission concentrations, expressed in parts per million by volume (dry basis), using CEMS outlet data. The hourly average shall be calculated based on completion of a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period, as specified in 40 CFR 60.13(e)(2).

(9 VAC 5-80-110 and 9 VAC 5-40-8140 G.)

18. **Valid NO_x CEMS Data** - At a minimum, valid CEMS hourly averages shall be obtained as specified below for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that each MWC unit is combusting MSW.

- a. At least 2 data points per hour shall be used to calculate each 1-hour arithmetic average.
- b. Each NO_x 1-hour arithmetic average shall be corrected to 7 percent O₂ on an hourly basis using the 1-hour arithmetic average of the O₂ (or CO₂) CEMS data.

(9 VAC 5-80-110 and 9 VAC 5-40-8140 G.)

19. **Use All Valid CEMS Data** – All valid CEMS data must be used in calculating emission averages even if the minimum CEMS data requirements of Condition 18 are not met.

(9 VAC 5-80-110 and 9 VAC 5-40-8140 G.)

20. **Substitute NO_x Emissions Data** - When NO_x continuous emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems as approved in writing by the Air Compliance Manager, Northern Virginia Regional Office and EPA, or Reference Method 19 to provide, as necessary, valid emissions data for a minimum of 75 percent of the hours per day for 90 percent of the days per calendar quarter each MWC unit is operated and combusting MSW.

(9 VAC 5-80-110 and 9 VAC 5-40-8140 G.)

21. **NO_x CEMS Performance Specifications** - The permittee shall operate the CEMS according to Performance Specification 2 in Appendix B of 40 CFR 60 and shall follow the procedures and methods below.
- a. During each relative accuracy test run of the CEMS required by Performance Specification 2 of Appendix B of 40 CFR 60, NO_x and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified below.
 - (1) For NO_x, Reference Method 7, 7A, 7C, 7D, or 7E shall be used.
 - (2) For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable, shall be used.
 - b. The span value of the CEMS shall be 125 percent of the maximum estimated hourly potential NO_x emissions of the MWC unit.

(9 VAC 5-80-110 and 9 VAC 5-40-8140 G.)

22. **NO_x CEMS QA and Calibrations** - Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 in Appendix F of 40 CFR 60.
(9 VAC 5-80-110 and 9 VAC 5-40-8140 G.)

Carbon Monoxide

23. **CO CEMS** – The permittee shall install, calibrate, maintain, and operate a CEMS for measuring CO at the combustor outlet or in the exhaust stack and record the output of the system.
(9 VAC 5-80-110, 9 VAC 5-40-8150 C. and Condition 15 of 1/12/87 PSD Permit)
24. **CO Emission Standard Compliance by CEMS** – Compliance with the CO emissions limit in Condition A.14 shall be determined by using the CEMS specified in Condition 23 based on a 4-hour block arithmetic average. The 4-hour block arithmetic average shall be calculated from 1-hour arithmetic averages expressed in parts per million by volume corrected to 7 percent oxygen (dry basis). The 1-hour arithmetic averages shall be calculated using the data points generated by the continuous emission monitoring system.
(9 VAC 5-40-8150 C.)
25. **Valid CO CEMS Data** - At a minimum, valid CEMS hourly emissions averages shall be obtained as specified below for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that each MWC unit is combusting MSW.

- a. At least 2 data points per hour shall be used to calculate each 1-hour arithmetic

average.

- b. Each CO 1-hour arithmetic average shall be corrected to 7 percent O₂ on an hourly basis using the 1-hour arithmetic average of the O₂ (or CO₂) CEMS data.

(9 VAC 5-80-110 and 9 VAC 5-40-8150 C.)

26. **Use All Valid CEMS Data** – All valid CEMS data must be used in calculating emission averages even if the minimum CEMS data requirements of Condition 25 are not met.
(9 VAC 5-40-8150 C.)

27. **Substitute CO Emissions Data** - When carbon monoxide continuous emission data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems, as approved in writing by the Regional Air Compliance Manager, Northern Virginia Regional Office and EPA, or Reference Method 10 to provide, as necessary, the minimum valid emission data.
(9 VAC 5-80-110 and 9 VAC 5-40-8150 C.)

28. **CO CEMS Performance Specifications** – The permittee shall operate the CEMS according to Performance Specification 4A in Appendix B of 40 CFR 60 and shall follow the procedures and methods below:

- a. During each relative accuracy test run of the CEMS performed in accordance with Performance Specification 4A, CO and O₂ (or CO₂) data shall be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and the test methods specified below:

- (1) For carbon monoxide, Reference Method 10, 10A, or 10B.

- (2) For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable.

- b. The span value of the CEMS shall be 125 percent of the maximum estimated hourly potential CO emissions of the each MWC unit.

(9 VAC 5-80-110 and 9 VAC 5-40-8150 C.)

29. **CO CEMS QA and Calibrations** – Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS shall be performed in accordance with Procedure 1 in Appendix F of 40 CFR 60.
(9 VAC 5-80-110 and 9 VAC 5-40-8150 C.)

D. Recordkeeping

1. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Air Compliance Manager, Northern Virginia Regional Office. These records shall include, but are not limited to; those provided in Conditions 2 through 11 below and shall include the calendar date for each record. The records shall be maintained onsite in either paper copy or computer-readable format, unless the Air Compliance Manager approves an alternative format, and be available on-site for inspection by DEQ for a period of at least five years.
(9 VAC 5-80-110, 9 VAC 5-40-8160 B, 9 VAC 5-40-8160 B.1., 9 VAC 5-40-8160 H and Condition 7 of Part II of 1/12/87 PSD Permit)
2. **CEMS, Control Device Operating Parameter Data and MWC Unit Load**– The permittee shall record the emission concentrations, parameter data and calculated emission rates measured and determined as specified below:
 - a. All 6-minute block average opacity levels as specified in Condition C.2.
 - b. All 1-hour average SO₂ emission concentrations as specified in Condition C.9.
 - c. All 1-hour average NO_x emission concentrations as specified in Condition C.17.
 - d. All 1-hour average CO emission concentrations as specified in Condition C.23.
 - e. All 24-hour daily geometric average SO₂ emission concentrations and all 24-hour daily geometric average percent reductions in SO₂ emissions as specified in Condition C.9.
 - f. All 24-hour daily arithmetic average NO_x emission concentrations as specified in Condition C.17.
 - g. All 4-hour block or 24-hour daily arithmetic average CO emission concentrations, as applicable, as specified in Condition C.24.
 - h. All 4-hour block arithmetic average MWC unit load levels and fabric filter inlet temperatures as specified in Conditions A.9 and A.10.

(9 VAC 5-80-110 and 9 VAC 5-40-8160 B.2.)

3. **Emission and Operating Parameter Exceedances** – The permittee shall record the calendar dates when any of the average emission concentrations, percent reductions, or operating parameters recorded under Condition 2 are above the applicable limits, with reasons for such exceedances and a description of corrective actions taken.
(9 VAC 5-80-110 and 9 VAC 5-40-8460 B.)

4. **Insufficient CEMS and Other Monitoring Data** – The permittee shall record the calendar dates on which the minimum number of hours of any of the data specified below have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

- a. SO₂ emissions data;
- b. NO_x emissions data;
- c. CO emissions data;
- d. MWC unit load data;
- e. Fabric filter inlet temperature data;

(9 VAC 5-80-110 and 9 VAC 5-40-8460 B.)

5. **Exclusions of Emission and Operating Data** – The permittee shall record each occurrence that SO₂ emissions data, NO_x emissions data, or operational data (i.e., CO emissions, unit load, and fabric filter baghouse inlet temperature) have been excluded from the calculation of average emission concentrations or parameters, and the reasons for excluding the data.

(9 VAC 5-80-110 and 9 VAC 5-40-8160 B.6.)

6. **Drift Tests and QA Determinations** - The permittee shall record the results of daily drift tests and quarterly accuracy determinations for SO₂, NO_x, and CO CEMS, as required under Appendix F of 40 CFR 60, Procedure 1.

(9 VAC 5-80-110 and 9 VAC 5-40-8160 B.)

7. **Performance Test Reports** – The test reports documenting the results of all annual performance tests listed below, shall be recorded along with supporting calculations.

- a. The results of all annual performance tests conducted to determine compliance with the particulate matter, opacity, beryllium, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, hydrogen fluoride, sulfuric acid and fugitive ash emission limits.
- b. For all dioxin/furan performance tests, the maximum demonstrated MWC unit load and maximum demonstrated fabric filter baghouse inlet temperature (for each fabric filter baghouse) shall be recorded.

(9 VAC 5-80-110 and 9 VAC 5-40-8460 B.)

8. **Activated Carbon Feed and Injection System Operating Data** – The permittee shall record the following data related to the activated carbon injection system.

- a. The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated as required in Condition B.8 during all annual performance tests for mercury emissions, with supporting calculations. The average carbon mass feed rate shall be based on an 8-hour average.
- b. The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated for each hour of operation as required in Condition B.9, with supporting calculations.
- c. The total carbon usage for each calendar quarter estimated as specified in Condition B.9, with supporting calculations.
- d. Carbon injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon feed rate (e.g., gravimetric feed rate) as specified in Condition B.8.

(9 VAC 5-80-110 and 9 VAC 5-40-8160 B.)

9. **Activated Carbon Feed Rate Deviations** – The permittee shall record the calendar dates and parameter data when the average carbon mass feed rates were less than the hourly carbon feed rates estimated during performance tests for mercury, with reasons for such feed rates and a description of corrective actions taken.

(9 VAC 5-80-110 and 9 VAC 5-40-8160 B.)

10. **Activated Carbon System Operating Parameter Deviations** – The permittee shall record the calendar dates and parameter data when the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate (e.g. gravimetric feed rate) are below the level(s) estimated during the performance tests, with reasons for such occurrences and a description of corrective actions taken.

(9 VAC 5-80-110 and 9 VAC 5-40-8160 B.)

11. **MWC Unit Hours of Operation and Refuse Combustion** - The permittee shall record and maintain records of the hours of operation of each MWC unit and refuse combusted by each MWC unit.

(9 VAC 5-80-110, 40 CFR 60.53 and Condition 18 of 1/12/87 PSD Permit)

E. Performance Testing

1. **Testing/Monitoring Ports** – In order to facilitate continuing compliance assessments, the permitted facility shall be constructed so as to allow for safe emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested at the appropriate locations in accordance with the applicable performance specifications and test methods (reference 40 CFR Part 60, Appendix B).

(9 VAC 5-80-110 and Condition 12 of 1/12/87 PSD Permit)

2. **Procedures and Test Methods**– The procedures and test methods presented in the Conditions 4 – 14 shall be used to demonstrate compliance with the emission standards provided in Conditions A.14 and emission limits in Conditions A.16 - 19 for particulate matter, cadmium, mercury, lead, hydrogen chloride, dioxin/furan, hydrogen fluoride, sulfuric acid mist, opacity and fugitive ash following the provisions of 40 CFR 60.8, with the exception of Paragraph (a).
(9 VAC 5-80-110, 9 VAC 5-40-8140 A. and 40 CFR 60.8)
3. **Test Protocol and Test Report** – The permittee shall submit a test protocol at least thirty days prior to the testing required in Conditions 4 - 14. The protocol(s) may contain notification and information related to one or more performance tests. Results of tests shall be reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the Air Compliance Manager, Northern Virginia Regional Office. Two copies of the test results shall be submitted to the Air Compliance Manager, Northern Virginia Regional Office within sixty days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 5-80-110, 9 VAC 5-50-30 and Condition 14 of 1/12/87 PSD Permit)

Particulate Matter

4. **Performance Test** – The permittee shall conduct an emission test for particulate matter from each MWC each calendar year (no more than 12 calendar months following the previous emission test) to demonstrate compliance with the emission standard in Condition A.14 and emission limit in Condition A.16 using the test methods and procedures provided below:
 - a. Reference Method 1 shall be used to select sampling site and number of traverse points.
 - b. Reference Method 3, 3A, or 3B, as applicable, shall be used for gas analysis.
 - c. Reference Method 5 shall be used for determining compliance with the particulate matter emission standard contained in Condition A.14 and emission limit in Condition A.17. The minimum sample volume shall be 1.7 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than 160 +/- 14 °C. An O₂ or CO₂ measurement shall be obtained simultaneously with each Reference Method 5 run.
 - d. As specified in 9 VAC 5-40-30, all performance tests shall consist of three test runs. The average of the particulate matter emission concentrations from the three test runs, one of which shall include normal soot-blowing operations, shall be used to determine compliance

(9 VAC 5-80-110, 9 VAC 5-40-8140 B. and Condition 13 of 1/12/87 PSD Permit)

Opacity

5. **Performance Test** – The permittee shall conduct an emission test for opacity from each MWC each calendar year (no more than 12 calendar months following the previous emission test) using Reference Method 9 to demonstrate compliance with the emission limit in Condition A.18.
(9 VAC 5-80-110, 9 VAC 5-40-8140 B. and Condition 13 of 1/12/87 PSD Permit)

Cadmium and Lead

6. **Performance Test** – The permittee shall conduct emissions tests for cadmium and lead from each MWC each calendar year (no more than 12 calendar months following the previous emission test) to demonstrate compliance with the emission standards in Condition A.14 and emission limits in Conditions A. 16 and A.17 using the test methods and procedures provided below:
- Reference Method 1 shall be used for determining the location and number of sampling points.
 - Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
 - Reference Method 29 shall be used for determining compliance with the cadmium and lead emission standards and limits.
 - An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Reference Method 29 test run for cadmium and lead.
 - All performance tests shall consist of a minimum of three test runs conducted under representative full load operating. The average of the cadmium or lead emission concentrations from three test runs or more shall be used to determine compliance.

(9 VAC 5-80-110, 9 VAC 5-40-8140 C. and Condition 13 of 1/12/87 PSD Permit)

Mercury

7. **Performance Test** – The permittee shall conduct an emission test for mercury from each MWC each calendar year (no more than 12 calendar months following the previous emission test) to demonstrate compliance with the emission standard in Conditions A.14 and emission limit in Condition A.17 using the test methods and procedures provided below:
- Reference Method 1 shall be used for determining the location and number of sampling points.
 - Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.

- c. Reference Method 29 shall be used to determine the mercury emission concentration. The minimum sample volume when using Reference Method 29 for mercury shall be 1.7 cubic meters.
- d. An O₂ (or CO₂) measurement shall be obtained simultaneously with each Reference Method 29 test run for mercury.
- e. The percent reduction in the potential mercury emissions (%*PHg*) is computed using the following equation:

$$(\%PHg) = \left(\frac{E_i - E_o}{E_i} \right) \times 100$$

where:

PHg = percent reduction of the potential mercury emissions achieved.

E_i = potential mercury emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis).

E_o = controlled mercury emission concentration measured at the mercury control device outlet, corrected to 7 percent oxygen (dry basis).

- f. All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the mercury emission concentrations or percent reductions from three test runs or more is used to determine compliance.

(9 VAC 5-80-110, 9 VAC 5-40-8140 C. and Condition 13 of 1/12/87 PSD Permit)

Hydrogen Chloride

- 8. **Performance Test** - The permittee shall conduct an emission test for hydrogen chloride from each MWC each calendar year (no more than 12 calendar months following the previous emission test) to demonstrate compliance with the hydrogen chloride emission standard in Condition A.14 and emission limit in Condition A.17 using the test methods and procedures provided below:
 - a. Reference Method 26 or 26A, as applicable, shall be used to determine the hydrogen chloride emission concentration. The minimum sampling time for Reference Method 26 shall be 1 hour.
 - b. An O₂ (or CO₂) measurement shall be obtained simultaneously with each Reference Method 26 test run for hydrogen chloride.
 - c. The percent reduction in potential hydrogen chloride emissions (% *PHCl*) is

computed using the following equation:

$$(\%PHCl) = \left(\frac{E_i - E_o}{E_i} \right) \times 100$$

where:

$\%PHCl$ = percent reduction of the potential hydrogen chloride emissions achieved.

E_i = potential hydrogen chloride emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis).

E_o = controlled hydrogen chloride emission concentration measured at the control device outlet, corrected to 7 percent oxygen (dry basis).

- d. All performance tests shall consist of three test runs under representative full load operating conditions. The average of the hydrogen chloride emission concentrations or percent reductions from the three test runs shall be used to demonstrate compliance.

(9 VAC 5-40-8140 E., 9 VAC 5-80-1180 and Condition 13 of 1/12/87 PSD Permit)

Dioxin/Furan

9. **Performance Test** - The permittee shall conduct an emission test for dioxin/furan each calendar year (no more than 12 calendar months following the previous emission test) to demonstrate compliance with the emission standard in Condition A.14 and emission limit in Condition A.17 using the test methods and procedures provided below:
 - a. Reference Method 1 shall be used for determining the location and number of sampling points.
 - b. Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
 - c. Reference Method 23 shall be used for determining the dioxin/furan emission concentration.
 - d. The minimum sample time shall be 4 hours per test run.
 - e. All performance tests shall consist of three test runs under representative full load operating conditions. The average of the dioxin/furan emission concentrations from the three test runs is used to demonstrate compliance.
 - f. An O_2 (or CO_2) measurement shall be obtained simultaneously with each Reference Method 23 test run for dioxin/furan.

(9 VAC 5-80-110, 9 VAC 5-40-8140 F. and Condition 13 of 1/12/87 PSD Permit)

10. **Reduced Testing Schedule** – The permittee may elect to conduct annual performance tests for only one MWC unit per year when performance tests over the previous 2-year period indicate that dioxin/furan emissions are less than or equal to 15 nanograms per dry standard cubic meter (total mass) corrected to 7 percent O₂ for all MWC units. At a minimum, a performance test for dioxin/furan emissions shall be conducted annually (no more than 12 months following the previous performance test) for one MWC unit. Each year one MWC unit shall be tested, and the other MWC units shall be tested in sequence (e.g., unit 1, unit 2, and unit 3, as applicable) in the following years. If each annual performance test continues to indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass) corrected to 7 percent O₂, the permittee may continue conducting a performance test on only one MWC per year. If any annual performance test indicates a dioxin/furan emission level greater than 15 nanograms per dry standard cubic meter (total mass) corrected to 7 percent O₂, performance tests thereafter shall be conducted annually on all MWC units until and unless all annual performance tests for all MWC units over a 2-year period indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass) corrected to 7 percent O₂.
(9 VAC 5-80-110 and 9 VAC 5-40-8140 F.5.)

11. **Notification of Reduced Testing Schedule** – In the event the permittee intends to follow a reduced dioxin/furan testing schedule, notification of the intent to reduce the testing schedule shall be provided in the report required in Condition F.1.
(9 VAC 5-80-110 and 9 VAC 5-40-8140 F.)

Hydrogen Fluoride and Sulfuric Acid Mist

12. **Performance Test** - The permittee shall conduct emission tests for hydrogen fluoride and sulfuric acid from each MWC each calendar year (no more than 12 calendar months following the previous emission test) to demonstrate compliance with the emission limits in Condition A.17 using appropriate test methods and procedures.
(9 VAC 5-80-110 and Condition 13 of 1/12/87 PSD Permit)

Fugitive Ash

13. **Performance Test** - The permittee shall conduct an emission test for fugitive ash on an annual basis (no more than 12 calendar months following the previous emission test) to demonstrate compliance with the emission limits in Condition A.19 using the test methods and procedures provided below:
- Reference Method 22 shall be used for determining compliance with the fugitive ash emission limit. The minimum observation time shall be a series of three 1-hour observations. The observation period shall include times when the facility is transferring ash from the MWC unit to the area where ash is stored or loaded into containers or trucks.

- b. The average duration of visible emissions per hour shall be calculated from the three 1-hour observations. The average shall be used to determine compliance with the fugitive ash emission limit.

(9 VAC 5-80-110 and 9 VAC 5-40-8140 H.)

14. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

The following table is only required for those pollutants that have emission limits.

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
NO _x	EPA Method 7
SO ₂	EPA Method 6
CO	EPA Method 10
Hydrogen Flouride	EPA Method 26
Sulfuric Acid Mist	EPA Method 8

(9 VAC 5-80-110)

F. Reporting

1. **Emissions and Parametric Monitoring Data Report** – The permittee shall submit a semi-annual report including the information specified below, as applicable, according to the schedule provided in Condition 3. The time periods covering each semi-annual period shall be January 1st through June 30th and July 1st through December 31st.
- a. A summary of data collected for all pollutants and parameters regulated under Rule 4-54 and this permit, including the information specified below:
- (1) A list of the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, hydrogen fluoride, sulfuric acid mist and fugitive ash emission levels achieved during the performance tests recorded under Section E.
 - (2) A list of the highest emission level recorded for 24-hr SO₂, 24-hr NO_x, 4-hr CO, 4-hr MWC unit load level, and 4-hr fabric filter baghouse inlet temperature based on the data recorded under Conditions D.2.
 - (3) List the highest opacity level measured based on the data recorded under Condition D.2.
 - (4) The total number of days that the minimum number of hours of data for SO₂, NO_x, CO, MWC unit load and fabric filter baghouse inlet temperature data were not obtained based on the data recorded under Condition D.4.

- (5) The total number of hours that data for SO₂, NO_x, CO, MWC unit load and fabric filter baghouse inlet temperature were excluded from the calculation of average emission concentrations or parameters based on the data recorded under Condition D.4.
- b. The summary of data reported under a. above shall also provide the same types of data for the calendar year proceeding the year being reported, in order to provide a summary of performance over a 2-year period.
- c. The summary of data in a. and b. above shall highlight any emission or parameter levels that did not achieve the emission or parameter limits specified in Article 54 and this permit.
- d. A notification of intent to begin the reduced dioxin/furan performance testing schedule specified in Condition E.10 during the following calendar year.

(9 VAC 5-80-110 and 9 VAC 5-40 8160 D.)

- 2. **Compliance/Deviation Report** – The permittee shall submit a semi-annual report which includes the information specified below for any recorded pollutant or parameter that does not comply with the pollutant or parameter limit specified under Article 54 and this permit, according to the schedule specified in Condition 3. The time periods covering each semi-annual period shall be January 1st through June 30th and July 1st through December 31st.
 - a. Data concerning exceedances of SO₂, NO_x, and CO emission standards, MWC unit load level, and fabric filter baghouse inlet temperature, and opacity limits recorded under Condition D.2 and D.3.
 - b. If the test reports document any NO_x, CO, particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels that were above the applicable pollutant limits, include a copy of the test report or portion of that report documenting the emission levels and the corrective actions taken.
 - c. Data concerning exceedances of the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate and carbon mass feed rate recorded under Condition D.8 and D.9.

(9 VAC 5-80-110 and 9 VAC 5-40-8160 E.)

- 3. **Emissions and Parametric Monitoring Data Report Schedule** – The permittee shall submit the data reports required in Condition 1 and 2 no later than March 1st and September 1st of each year following the semi annual period in which the data were collected.

(9 VAC 5-80-110, 9 VAC 5-40-8160 D. and 9 VAC 5-40-8160 E.)

- 4. **Report Copies** – All reports identified under Conditions 1 and 2 shall be submitted as a

paper copy, postmarked on or before the submittal dates specified, and maintained on-site as paper copies for a period of five years.
(9 VAC 5-80-110 and 9 VAC 5-40-8160 G.)

5. **Alternative Reporting Schedule** – The permittee may request an alternative reporting schedule by submitting a written request to the Air Compliance Manager, Northern Virginia Regional Office. An alternative schedule may only begin after the permittee has received written authorization by the Department.
(9 VAC 5-80-110 and 9 VAC 5-40-8160 I.)
6. **Quarterly Excess Emissions/CEMS Downtime Reports** – The permittee shall submit a written report of excess emissions and either a monitoring systems performance report or summary report form, or both, in accordance with 40 CFR 60.7 (c), to the Air Compliance Manager, Northern Virginia Regional Office. The reports shall cover each calendar quarter and be postmarked by the 30th day following the end of each calendar quarter. The reports shall include the following information:
 - a. The magnitude of excess emissions computed in accordance with 9 VAC 5-40-41 B.6., any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;
 - b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measure adopted;
 - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and
 - d. When no excess emissions have occurred or the continuous monitoring system have not been inoperative, repaired or adjusted, such information shall be stated in the report.

(9 VAC 5-80-110 and 40 CFR 60.7(c))

IV. Facility Wide Conditions - Operator Training and Certification

A. Requirements

1. **Chief Facility Operator and Shift Supervisor Training Certification** – Each chief facility operator and shift supervisor shall obtain and maintain a current provisional operator training certification from the American Society of Mechanical Engineers as provided in the "Standard for the Qualification and Certification of Resource Recovery Facility Operators" (see 9 VAC 5-20-21) or a board-approved certification program, or shall have completed full certification or scheduled a full certification exam with either the American Society of Mechanical Engineers as provided in the "Standard for the Qualification and Certification of Resource Recovery Facility Operators" (see 9 VAC 5-20-21) or a board-approved certification program. The board-approved certification requirement may be met by obtaining a license from the Board of Waste Management Facility Operators provided the training and licensing is conducted in accordance with Chapter 22.1 (§[54.1-2209](#) et seq.) of Title 54.1 of the Code of Virginia, and with 18VAC155 Chapter 20. Chief facility operators and shift supervisors who receive full certification will no longer be required to maintain provisional certification. (9 VAC 5-80-110, 9 VAC 5-40-8130 A., 9 VAC 5-40-8130 B., 9 VAC 5-40-8130 I.)
2. **Licensed Personnel on Duty** – The permittee shall ensure that the facility is operated at all times with a person on duty who is responsible for the proper operation of the facility and has a license from the Board for Waste Management Facility Operators in the correct classification. (9 VAC 5-80-110 and 9 VAC 5-40-8130 C.)
3. **Appropriate Personnel on Duty and Stand-in Provisions** – The permittee shall ensure that a fully certified chief facility operator or a fully certified shift supervisor, or provisionally certified chief facility operator or shift supervisor who is scheduled to take the full certification exam, staffs the facility at any time the facility is operated. A provisionally certified control room operator or provisionally certified shift supervisor may temporarily stand in for up to twelve consecutive without any notification to DEQ. A provisionally certified control room operator or provisionally certified shift supervisor may stand in for up to two consecutive weeks and shall notify the Regional Air Compliance Manager, Northern Virginia Regional Office in writing within five business days of the beginning of the stand-in period. A provisionally certified control room operator or provisionally certified shift supervisor may stand in for periods longer than two consecutive weeks if the permittee follows the notification procedures above and demonstrates to DEQ that a good faith effort is being made to ensure that a certified chief facility operator or certified shift supervisor is on site as soon as practicable. (9 VAC 5-80-110, 9 VAC 5-40-8130 D. and John Seitz memorandum "Municipal Waste Combustor – Control Room Operator stand-in Provisions dated 5/14/1998)
4. **Operator Training Course** - All chief facility operators, shift supervisors, and control room operators must complete the board-approved MWC operator training course. This requirement does not apply to chief facility operators, shift supervisors, and control room

operators who have obtained full certification from the American Society of Mechanical Engineers prior to August 4, 1999. The permittee may request that the board waive this requirement for chief facility operators, shift supervisors, and control room operators who have obtained provisional certification from the American Society of Mechanical Engineers prior to August 4, 1999.

(9 VAC 5-80-110, 9 VAC 5-40-8110 B. and 9 VAC 5-40-8130 E.)

5. **Operating Manual** - The permittee shall develop and update on a yearly basis a site-specific operating manual that shall, at a minimum, address the elements of MWC unit operation specified as follows:

- a. A summary of the applicable standards under this permit;
- b. A description of basic combustion theory applicable to a MWC unit;
- c. Procedures for receiving, handling, and feeding municipal solid waste;
- d. MWC unit startup, shutdown, and malfunction procedures;
- e. Procedures for maintaining proper combustion air supply levels;
- f. Procedures for operating the MWC unit within the standards established under this permit;
- g. Procedures for responding to periodic upset or off-specification conditions;
- h. Procedures for minimizing particulate matter carryover;
- i. Procedures for handling ash;
- j. Procedures for monitoring MWC unit emissions;
- k. Operating procedures for all air pollution control equipment;
- l. Annual maintenance schedule for air pollution control equipment;
- m. Reporting and record keeping procedures.

(9 VAC 5-80-110, 9 VAC 5-40-8130 F. and Part II Condition 9 of 1/12/87 PSD permit)

6. **Annual Training/Review of Operating Manual** - The permittee shall establish a training program to review the operating manual annually with each person who has responsibilities affecting operation of the facility. This includes, but is not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers.

(9 VAC 5-80-110 and 9 VAC 5-40-8130 G.)

7. **Availability of Operating Manual** – The operating manual shall be in a location which is readily accessible to all persons required to undergo training. The operating manual and records of training shall be available for inspection by DEQ upon request.
(9 VAC 5-80-110 and 9 VAC 5-40-8130 H.)
8. **Air Pollution Control Equipment Operator Training** – All air pollution control equipment operators shall be trained and certified in the proper operation of all such equipment. Certification shall consist of a statement of time, place and nature of training provided.
(9 VAC 5-80-110 and Part II Condition 8 of 1/12/87 PSD permit)

B. Recordkeeping

1. **Supervisor and Operator Training/Certifications** – The permittee shall maintain the following records:
 - a. Records showing the names of the MWC chief facility operator, shift supervisors, and control room operators who have been provisionally certified by the American Society of Mechanical Engineers or an equivalent board-approved certification program as required by Condition A.1 including the dates of initial and renewal certifications and documentation of current certification.
 - b. Records showing the names of the MWC chief facility operator, shift supervisors, and control room operators who have completed the EPA MWC operator training course or a board-approved equivalent course as required by Condition A.4 including documentation of training completion.
 - c. Air pollution control equipment operator training required in Condition A.8.

(9 VAC 5-80-110, 9 VAC 5-40-8160 B. and Part II Condition 8 of 1/12/87 PSD permit)
2. **Operating Manual Review** – The permittee shall record the names of persons who have completed a review of the operating manual as required by Condition A.5 including the date of the initial review and subsequent annual reviews.
(9 VAC 5-80-110 and 9 VAC 5-40-8160 B.)

V. Facility Wide Conditions – Cold Solvent Degreasing

A. Requirements

These requirements apply to the use of cold cleaning machines that process metal parts and contain more than 1 liter of volatile organic compounds.

1. Immersion cold cleaning machines shall have a freeboard ratio of 0.75 or greater unless the machines are equipped with a cover that are kept closed except when parts are being placed into or being removed from the machines.
(9 VAC 5-80-110 and 9 VAC 5-40-6840 A.)
2. Immersion cold cleaning machines and remote reservoir cold cleaning machines shall:
 - a. Have a permanent, conspicuous label summarizing the operating requirements in Condition 3.
 - b. Be equipped with a cover that shall be closed at all times except during cleaning of parts or the addition or removal of solvent. For remote reservoir cold cleaning machines which drain directly into the solvent storage reservoir, a perforated drain with a diameter of not more than six inches shall constitute an acceptable cover.

(9 VAC 5-80-110 and 9 VAC 5-40-6840 A.)
3. Cold cleaning machines shall be operated in accordance with the following procedures:
 - a. Waste solvent shall be collected and stored in closed containers. The closed containers may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container.
 - b. Cleaned parts shall be drained at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping or rotating, the parts shall be positioned so that solvent drains directly back to the cold cleaning machine.
 - c. Flushing or parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaning machine. The solvent spray shall be a solid fluid stream, not an atomized or shower spray.
 - d. When the cover is open, the cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute (132 feet per minute), as measured between one and two meters (3.3 and 6.6 feet) upwind and at the same elevation as the tank lip.
 - e. Sponges, fabric, wood, leather, paper products and other absorbent materials shall

not be cleaned in cold cleaning machines.

- f. When a pump-agitated solvent bath is used, the agitator shall be operated to produce a rolling motion of the solvent with no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
- g. Spills during solvent transfer and use of the cold cleaning machine shall be cleaned up immediately, and the wipe rags or other sorbent material shall be immediately stored in covered containers for disposal or recycling.
- h. Work area fans shall be located and positioned so that they do not blow across the opening of the degreaser unit.
- i. The permittee shall ensure that the solvent level does not exceed the fill line.

(9 VAC 5-80-110 and 9 VAC 5-40-6840 A.)

- 4. The permittee shall not use, sell, or offer for sale use in a cold cleaning machine any solvent with a vapor pressure of 1.0 millimeters of mercury (mm Hg) or greater, measured at 20 ° C (68 °F) containing volatile organic compounds.
(9 VAC 5-80-110 and 9 VAC 5-40-6840 A.)

- 5. The permittee shall maintain for not less than two years and shall provide to DEQ personnel, upon request, the information specified below. An invoice, bill of sale, certificate that corresponds to a number of sales, Material Safety Data Sheet, or other appropriate documentation acceptable to the Regional Air Compliance Manager, Northern Virginia Regional Office, may be used to comply with this section.

- a. The name and address of the solvent supplier.
- b. The type of solvent including the product or vendor identification number.
- c. The vapor pressure of the solvent measured in mm Hg at 20 ° C (68 °F).

(9 VAC 5-80-110 and 9 VAC 5-40-6840 A.)

VI. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
IU-1	Fuel Oil Storage Tank	9 VAC 9-80-720 B	VOC	N/A
IU-2	MSW Building/Pit	9 VAC 9-80-720 B	PM and PM-10	N/A
IU-3	Non-ferrous Ash Building	9 VAC 9-80-720 B	PM and PM-10	N/A
IU-4	Residue Ash Building	9 VAC 9-80-720 B	PM and PM-10	N/A
IU-5	Lime Slaker Room	9 VAC 9-80-720 B	PM and PM-10	N/A
IU-6	Ash Removal	9 VAC 9-80-720 B	PM and PM-10	N/A
IU-7	Grizzly Scalper	9 VAC 9-80-720 B	PM and PM-10	N/A
IU-8	Hydraulic Shredder (in MSW Bldg.)	9 VAC 9-80-720 B	PM and PM-10	N/A
IU-9	HVAC Boiler	9 VAC 9-80-720 C	PM and PM-10, SO ₂ , NO _x , CO and VOC	0.55 MMBtu/hr
IU-10	Emergency Diesel Generator	9 VAC 9-80-720 C	PM and PM-10, SO ₂ , NO _x , CO and VOC	435 hp
IU – 11	Lime Storage Silo Vent	9 VAC 9-80-720 B	PM and PM-10	N/A
IU – 12	Dolomitic Lime Silo Vent	9 VAC 9-80-720 B	PM and PM-10	N/A
IU - 13	Carbon Silo Vent	9 VAC 9-80-720 B	PM and PM-10	N/A

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

VII. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
No appropriate requirements identified	N/A	N/A

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the (i) administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.

(9 VAC 5-80-140)

VIII. General Conditions

A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.

(9 VAC 5-80-110 N)

B. Permit Expiration

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.
3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.
4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
 - a. The date, place as defined in the permit, and time of sampling or measurements.
 - b. The date(s) analyses were performed.
 - c. The company or entity that performed the analyses.
 - d. The analytical techniques or methods used.
 - e. The results of such analyses.
 - f. The operating conditions existing at the time of sampling or measurement.(9 VAC 5-80-110 F)
2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9 VAC 5-80-110 F)
3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:
 - a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.
 - b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:
 - (1) Exceedance of emissions limitations or operational restrictions;
 - (2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,
 - (3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

- c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that “no deviations from permit requirements occurred during this semi-annual reporting period.”

(9 VAC 5-80-110 F)

D. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.
2. The identification of each term or condition of the permit that is the basis of the certification.
3. The compliance status.
4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.
5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.
6. Such other facts as the permit may require determining the compliance status of the source.
7. One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)
U. S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029.
(9 VAC 5-80-110 K.5)

E. Permit Deviation Reporting

The permittee shall notify the Regional Air Compliance Manager, Northern Virginia Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including

those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition VIII.C.3 of this permit.
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

F. Failure/Malfunction Reporting

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Regional Air Compliance Manager, Northern Virginia Regional Office by facsimile transmission, telephone or e-mail of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Regional Air Compliance Manager, Northern Virginia Regional Office.
(9 VAC 5-20-180 C)

1. The emission units that have continuous monitors subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not subject to the 14 day written notification.
2. Each owner required to install a continuous monitoring system subject to 9 VAC 5-40-41 or 9 VAC 5-50-410 shall submit a written report of excess emissions (as defined in the applicable emission standard) to the board for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the following information:
 - a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9 VAC 5-40-41 B 6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;
 - b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;
 - c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system

repairs or adjustments; and

- d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

All malfunctions of emission units not subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C require written reports within 14 days of the discovery of the malfunction.
(9 VAC 5-20-180 C, 9 VAC 5-40-50, and 9 VAC 5-50-50)

G. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.

(9 VAC 5-80-110 G.1)

H. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.

(9 VAC 5-80-110 G.2)

I. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(9 VAC 5-80-110 G.3)

J. Permit Modification

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1790, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.

(9 VAC 5-80-190 and 9 VAC 5-80-260)

K. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege.

(9 VAC 5-80-110 G.5)

L. Duty to Submit Information

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon

request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-110 G.6)

2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110 K.1)

M. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department.
(9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

N. Fugitive Dust Emission Standards

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;
2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
3. Installation and use of hoods, fans, and fabric filter baghouses to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;
4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 and 9 VAC 5-50-90)

O. Startup, Shutdown, and Malfunction

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-50-20 E and 9 VAC 5-40-20 E)

P. Alternative Operating Scenarios

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.
(9 VAC 5-80-110 J)

Q. Inspection and Entry Requirements

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.
3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

R. Reopening For Cause

The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

1. The permit shall be reopened if the Board or the administrator determines that the permit

contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
3. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

S. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.

(9 VAC 5-80-150 E)

T. Transfer of Permits

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)
2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)
3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

U. Malfunction as an Affirmative Defense

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.
2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:
 - a. A malfunction occurred and the permittee can identify the cause or causes of the

malfunction.

- b. The permitted facility was at the time being properly operated.
- c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.
- d. The permittee notified the board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F 2 b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.
- e. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.
- f. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

V. Permit Revocation or Termination for Cause

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any of the grounds for revocation or termination or for any other violations of these regulations.

(9 VAC 5-80-190 C and 9 VAC 5-80-260)

W. Duty to Supplement or Correct Application

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.

(9 VAC 5-80-80 E)

X. Stratospheric Ozone Protection

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A-F)

Y. Asbestos Requirements

The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9 VAC 5-60-70 and 9 VAC 5-80-110 A.1)

Z. Accidental Release Prevention

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

AA. Changes to Permits for Emissions Trading

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110 I)

BB. Emissions Trading

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.
2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

IX. State-Only Enforceable Requirements

A. Limitations

1. **Tipping Floor Negative Pressure** – The permittee shall ensure that a negative pressure is maintained on the tipping floor and ensure that air from within the building is used as combustion air as means to minimize odors at the facility.
(Condition 21 of 1/12/87 PSD Permit)
2. **Standard for Odor** - The provisions of 9 VAC 5-40-130 et seq., Emission Standards for Odor, Rule 4-2, apply.
(9 VAC 5-40-8080)
3. **Standards for Toxics** - The provisions of 9 VAC 5-40-160 et seq., Emission Standards for Toxic Pollutants, Rule 4-3, apply.
(9 VAC 5-40-8090)
4. **Metals Emissions Control** – Antimony and arsenic emissions from each MWC furnace shall be controlled by fabric filter baghouses. The fabric filter baghouses shall be provided with adequate access for inspection and shall be in operation when the MWC furnaces are operating.
(Condition 9 of 1/12/87 PSD Permit)
5. **Acid Gas Control** – Hydrogen bromide emissions from each MWC furnaces shall be controlled by air pollution control equipment that will reduce emissions by a minimum of 90 percent.
(Condition 10 of 1/12/87 PSD Permit)
6. **Toxics Emission Limits**– Emissions from the operation of each MWC unit shall not exceed the limitations specified below:

Antimony	0.14 lbs/hr	0.55 tons/yr
Arsenic	7.3×10^{-3} lb/hr	0.03 tons/yr
Beryllium	2.0×10^{-4} lbs/hr	7.94×10^{-4} tons/yr
Hydrogen Bromide	1.93 lbs/hr	7.67 tons/yr

Compliance with the limits shall be determined based on compliance with control device operational parameters/limitations contained, fuel and steam restrictions, MWC operational data, results of the annual stack tests, record keeping and any other relevant information necessary which can provide credible evidence of emissions performance. Annual emissions shall be calculated on a calendar year basis.
(Condition 7 of 1/12/87 PSD Permit)

7. **Performance Tests** - The permittee shall conduct emission tests for antimony, arsenic, and hydrogen bromide each calendar year (no more than 12 calendar months following the previous emission test) to demonstrate compliance with the emission limits in Condition 6. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30. The details of the tests are to be arranged with the Air Compliance Manager, Northern Virginia Regional Office. The permittee shall submit a test protocol at least thirty days prior to testing using the "Stack Test Protocol – Request for Approval" form attached to this permit. Two copies of the test results shall be submitted to the Air Compliance Manager, Northern Virginia Regional Office within sixty days after the test completion and shall conform to the test report format enclosed with this permit.
(Condition 13 of 1/12/87 PSD Permit)
8. **Record Keeping** – The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Air Compliance Manager, Northern Virginia Regional Office. These records shall include, but are not limited to the annual emissions calculations required in Condition 6 and performance test report required in Condition 7.
(Condition 7 of Part II of 1/12/87 PSD Permit)

APPENDIX A – [Reserved]

APPENDIX B – [Reserved]

mailed 3/31/07



NVRO-276-07

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

L. Preston Bryant, Jr.
Secretary of Natural Resources

NORTHERN VIRGINIA REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3801
www.deq.virginia.gov

David K. Paylor
Director

Jeffery A. Steers
Regional Director

March 29, 2007

Mr. Scott Drew
Facility Manager
Covanta Fairfax
9898 Furnance Road
Lorton, VA 22079

Registration No: 71920

Dear Mr. Drew:

Attached are administratively amended Pages 12 and 13 of your Title V permit in accordance with the provisions of the Commonwealth of Virginia State Air Pollution Control Board's (Board) Regulations for the Control and Abatement of Air Pollution (Regulations). This amendment addresses a correction to the following:

1. Pg. 12-Condition IIIA16: MWC Unit Criteria Pollutant Emission Limits:
NO_x (as NO₂) from 128.2 lbs/hr to 206.3 lbs/hr.
2. Pg. 13-Condition IIIA17: MWC Unit Non-Criteria Pollutant Emission Limits:
Total Dioxins and Furans from 2.0 ng/m³ lbs/hr to 2.0 ng/m³.

All other pages remain unchanged. You are reminded that this amendment shall not relieve Covanta Fairfax of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within thirty days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-200 provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date you actually received this permit or the date on which it was mailed to

Mr. Drew
Covanta Fairfax
Page 2

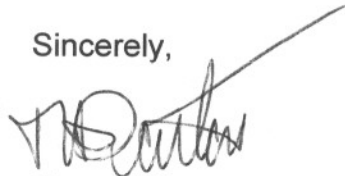
you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact the Northern Virginia Regional Office (NVRO) at 703.583.3800.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Darton", with a long, sweeping horizontal line extending to the right.

Terry H. Darton
Regional Air Permit Manager

THD/MCL/07276mnsr

Attachments: Permit Pages 12 and 13

cc: Director, OAPP (electronic file submission)
Manager, Data Analysis (electronic file submission)
Chief, Air Enforcement Branch (3AP12), U. S. EPA, Region III

potential mercury emission concentration (85 percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent.
(9 VAC 5-40-8010)

- i. Dioxin/Furan: 30 nanograms per dry standard cubic meter, expressed as total mass dioxins/furans, corrected to 7 percent oxygen.
(9 VAC 5-40-8040)

Compliance with these emission standards shall be determined by continuous emissions monitors (CEMs) or performance tests as detailed throughout this permit. The permittee may request that compliance with these emission standards be determined using carbon dioxide (CO₂) measurements corrected to an equivalent of 7 percent O₂. If authorized to do so, the permittee shall establish the relationship between O₂ and CO₂ levels as specified in Condition C.7 (O₂ and CO₂ CEMS).
(9 VAC 5-80-110 and 9 VAC 5-40-8140 D.)

15. Startup and Shutdown – The emission standards in Condition 14 apply at all times except during periods of startup, shutdown, and malfunction. Duration of startup, shutdown, or malfunction periods are limited to three hours per occurrence, except as provided below:

- a. The startup period commences when the MWC unit begins continuous burning of MSW and does not include any warm-up period when the MWC unit is combusting natural gas or other non-MSW fuel, and no MSW is being fed to the combustor.
- b. Continuous burning is the continuous, semi-continuous, or batch feeding of MSW for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of MSW solely to provide thermal protection of the grate or hearth during the startup period when MSW is not being fed to the grate is not considered to be continuous burning.
- c. For the purpose of compliance with the CO emission limit, if a boiler water level control or loss of combustion air control (e.g., loss of combustion air fan, induced draft fan, combustion grate bar failure) is determined to be a malfunction, the duration of the malfunction period is limited to fifteen hours per occurrence.

(9 VAC 5-80-110 and 9 VAC 5-40-8100 B.1.)

16. MWC Unit Criteria Pollutant Emission Limits - Emissions from the operation of each MWC unit shall not exceed the limits specified below:

SO ₂	44.4 lbs/hr	176.6 tons/yr
NO _x (as NO ₂)	206.3 lbs/hr	716.2 tons/yr

CO	158.1 lbs/hr	60.3 tons/yr
PM	7.5 lbs/hr	30.0 tons/yr
Lead	1.7 lbs/hr	6.7 tons/yr

Compliance shall be determined based on CEMS data, compliance with control device operational parameters/limitations, fuel restrictions and steam limits, MWC operational data, results of annual stack tests, record keeping and any other relevant information necessary which can provide credible evidence of emissions performance. Annual emissions shall be calculated on a calendar year basis.

(9 VAC 5-80-110 and Condition 6 of 1/12/87 PSD Permit)

17. **MWC Unit Non-Criteria Pollutant Emission Limits** - Emissions from the operation of each MWC unit shall not exceed the limits specified below:

Cadmium	4.7×10^{-2} lbs/hr	0.19 tons/yr
Mercury	0.33 lbs/hr	1.32 tons/yr
HCl	28.53 lbs/hr	113.6 tons/yr
Total Dioxins and Furans (USEPA Equivalents)	2.0 ng/m^3	2.42×10^{-6} tons/yr
Hydrogen Flouride	0.45 lbs/hr	1.78 tons/yr
Sulfuric Acid Mist	7.1 lbs/hr	28.3 tons/yr

Compliance with the limits shall be determined based on compliance with control device operational parameters/limitations, fuel restrictions and steam limits, MWC operational data, results of the annual stack tests, record keeping and any other relevant information necessary which can provide credible evidence of emissions performance. Annual emissions shall be calculated on a calendar year basis.

(9 VAC 5-80-110 and Condition 7 of 1/12/87 PSD Permit)

18. **Visible Emissions** – The permittee shall not cause or permit to be discharged into the atmosphere from each MWC unit any visible emissions in excess of 10 percent opacity during any six-minute period. Compliance shall be demonstrated annually as provided in Condition III.E.5. Continuous opacity monitoring data collected for the purpose of compliance with this condition shall be used as an indicator of proper operation and good combustion practices and as a tool to implement corrective actions as necessary. The permittee may be required to conduct a retest of visible emissions after any corrective